

APPLICATION FOR PERMIT  
TO APPROPRIATE THE PUBLIC WATERS OF THE STATE OF NEVADA

Date of filing in State Engineer's Office.....OCT 14 1983  
Returned to applicant for correction.....NOV 28 1983  
Corrected application filed.....  
Map filed.....DEC 14 1983 under 47321

The applicant.....Trans-Pacific Geothermal, Inc.  
.....1419 Broadway....., of.....Oakland.....  
.....California.....94612....., hereby make.... application for permission to appropriate the public  
.....State and Zip Code No......  
waters of the State of Nevada, as hereinafter stated. (If applicant is a corporation, give date and place of incorporation; if a copartnership or association, give names of members.) TGS Associates is a partnership comprised of Trans-Pacific Geothermal, Inc., incorporated in Nevada 11/16/81 and SR Geothermal, Inc., incorporated in Delaware 9/23/81.

1. The source of the proposed appropriation is.....deep geothermal reservoir - 10,000 feet  
.....underground.....  
Name of stream, lake, spring, underground or other source
2. The amount of water applied for is.....five (5).....second-feet  
One second-foot equals 448.83 gals. per min.  
(a) If stored in reservoir give number of acre-feet.....
3. The water to be used for.....industrial purposes  
Irrigation, power, mining, manufacturing, domestic, or other use. Must limit to one use.
4. If use is for:  
(a) Irrigation, state number of acres to be irrigated.....  
(b) Stockwater, state number and kinds of animals to be watered.....  
(c) Other use (describe fully under "No. 12. Remarks").....industrial.....  
(d) Power:  
(1) Horsepower developed.....no external pumps will be used.....  
(2) Point of return of water to stream.....reinjection or surface disposal; will depend on water quality......
5. The water is to be diverted from its source at the following point.....Located in SW $\frac{1}{4}$  of NE $\frac{1}{4}$ , Sec 33 T25N, R37E, MDB&M, at a point from whence the SW corner of Sec 33 bears S45° 05' 43" W, a distance of 4682.90 feet.  
Describe as being within a 40-acre subdivision of public survey, and by course and distance to a section corner. If on unsurveyed land, it should be so stated.
6. Place of use.....SW $\frac{1}{4}$  of NE $\frac{1}{4}$ , Sec 33, T25N, R37E, MDB&M  
Describe by legal subdivision. If on unsurveyed land, it should be so stated.
7. Use will begin about.....January 1.....and end about.....December 31....., of each year.  
Month and Day Month and Day
8. Description of proposed works. (Under the provisions of NRS 535.010 you may be required to submit plans and specifications of your diversion or storage works.).....The proposed works would be the completed geothermal well. Water would be diverted from the geothermal reservoir through the cased wellbore to the wellhead for the initial beneficial use which is well flow flumes, drilled well with pump and motor, etc. testing to evaluate the geothermal reservoir. The wellbore will be cased to an estimated depth of 6300 feet.  
State manner in which water is to be diverted, i.e. diversion structure, ditches and
9. Estimated cost of works.....one million five hundred thousand dollars (\$1,500,000).....

10. Estimated time required to construct works 60-90 days  
If well completed, describe works.
11. Estimated time required to complete the application of water to beneficial use three years (3)
12. Remarks: For use other than irrigation or stock watering, state number and type of units to be served or annual consumptive use. The industrial use of appropriated water, consequent to this application, would be the production of water or geothermal effluent from wellhead, then through surface pipeline, to electrical generating plant. Additional economic utilization of the geothermal energy may be affected subsequent to or separate from electrical generation. Estimated consumption: 322 ac/ft per year.  
s/Walter Turnbull  
 By Walter Turnbull, Secretary-Treasurer  
1419 Broadway  
Oakland, CA 94612
- Compared js/se js/se
- Protested \_\_\_\_\_

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APPROVAL OF STATE ENGINEER

This is to certify that I have examined the foregoing application, and do hereby grant the same, subject to the following limitations and conditions:

This permit is issued subject to existing rights. It is understood that the amount of geothermal fluid herein granted is only a temporary allowance and that the final right obtained under this permit will be dependent upon the amount actually placed to beneficial use. It is also understood that this right must allow for a reasonable decrease of fluid pressure and heat. The well shall be equipped and maintained to prevent any waste of the geothermal fluid. Accurate measurements must be kept of discharge of the production well and the amount of fluid injected into the injection well to determine the total amount of fluid diverted and consumed for a beneficial use.

The production and injection well are to be cemented from the producing levels to the surface to protect fresh water zones. This permit is issued subject to the condition that only geothermal fluids are to be diverted and used beneficially for heating purposes and fresh, cold water aquifers are not to be diverted. The used geothermal fluids are to be returned to the source via the injection well. The issuance of this permit does not waive the requirements that the permit holder obtain other permits from State, Federal and local agencies. A detailed log on the injection well and/or other analyses of the system used for returning the used geothermal fluids to the source must be submitted together with the Proof of Completion.

(CONTINUED ON Page 2)

The amount of water to be appropriated shall be limited to the amount which can be applied to beneficial use, and not to exceed 5.0 cubic feet per second.

Work must be prosecuted with reasonable diligence and be completed on or before November 21, 1989

Proof of completion of work shall be filed before December 21, 1989

Application of water to beneficial use shall be made on or before November 21, 1992

Proof of the application of water to beneficial use shall be filed on or before December 21, 1992

Map in support of proof of beneficial use shall be filed on or before \_\_\_\_\_

Completion of work filed \_\_\_\_\_ IN TESTIMONY WHEREOF, I, PETER G. MORROS  
 State Engineer of Nevada, have hereunto set my hand and the seal of

Proof of beneficial use filed \_\_\_\_\_ my office, this 21st day of November,

Cultural map filed \_\_\_\_\_ A.D. 19 86

Certificate No. \_\_\_\_\_ Issued \_\_\_\_\_



218 (Rev.)

State Engineer

61785 5.0 cert 8/9/00

## (PERMIT TERMS CONTINUED)

An annual report for this well must be filed under this permit describing the amount of geothermal fluid diverted and consumed to a beneficial use for the calendar year. This report must detail the amount of fluid produced and injected.

The total withdrawal of the geothermal fluid shall be limited to 3,620 acre-feet per year but the total consumptive use of the geothermal fluid is limited to only incidental fluid losses in the system and in no case shall it amount to more than 10% of the volume withdrawn annually. The State Engineer does not waive the right to make a determination of incidental fluid losses at any time and impose additional conditions thereto. This permit is further issued subject to the provisions of NRS 533.372(1) and with the understanding that the power or energy generated by the beneficial use of this water or steam is subject to recapture and use within the boundaries of the State of Nevada when the need arises.

This Permit does not extend the permittee the right of ingress and egress on public, private or corporate lands.

The total combined consumptive duty of geothermal fluid under Permits 36931, 41892, 41914, 41920, 41923, 41929, 43050, 43051, 43052, 43557, 46951, 47142, 47322, 47323, 48932, 48933, 48934, 48935, 49572, 49573, 49574, 49644, 49802, 49803 and 49806 shall not exceed 10,704 acre-feet annually.